

SEMLYEN, A.

Current supply to the magnets of very sensitive relays. p.55. (ELECTROTEHNICA, Bucuresti, Vol. 1, No. 1/2, Jan./Feb. 1953)

SO: Monthly List of East European Accessions, (SEAL), LC, Vol. 4, No. 6, June 1955, Uncl.

SEMYEN, A.

Establishing the Parameters of Orthogonal Curves Families for the
Determination of Equipotential Lines and Lines of Force in a Plane-parallel
Field. Elektrotehnika (Electrical Engineering), #4:117: Apr 55

SEMLYEN, A.

Selection of Air Gaps for Electromagnets with Translational Movements.
ELECTROTEHNICA (Electrical Engineering) #10:419:Oct 55

SEMLYEN, A.

Selection of principal dimensions of simple bimetallic lamellae used as overcurrent relays.

p. 183 (Electrotechnica) Vol. 5, no. 6, June 1957, Bucuresti, Rumania

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

← ~~SEMLYEN, Adam, ing.~~, conf. (Timisoara)

Properties of differential impedances. Electrotehnica 10 no. 1:
29-33. Ja '61

1. Conferentiar la Institutul politehnic, Timisoara.

R/006/62/010/006/002/002
D015/D105

AUTHOR: Semlyen, Adam, Instructor (Timisoara)

TITLE: Problems of using an analog computer for determination of optimum power distribution among power plants

PERIODICAL: Energetica, v. 10, no. 6, 1962, 258-262

TEXT: Analog computers can be used for the determination of the optimum distribution of active and reactive power among operational power plants and units, and of the total power production costs within the entire system. In some analog computers, calculation of net work loss is based on a loss formula. It is preferable, however, to use a d.c. network model since it insures direct determination of network loss and of differential costs with a specific network pattern and variable consumption. Errors in the determination of the network loss may be eliminated by increasing the resistance in the network model. The author examines the losses within the network, determines the losses and their partial derivatives, establishes the principle of the d.c. network simulator and presents the direct determination of total costs. The d.c. network simulator

Card 1/3

Problems of using an analog computer

R/006/62/010/006/002/002
D015/D105

determinable only by previous measurement. There are 3 figures. The 2 English-language references read as follows: M.J.Brown: An Automatic Dispatching System, Transactions AIEE, Part. III-A, 1959, p. 957-963 and A.R.Miller, H.R.Koen and J.S.Deliyannides: The Use of Power Transfer Equations to Derive Economic Co-ordination Relationships Expressed as Functions of Voltage Phase Angles, Transactions AIEE, Part. III-A, 1959, p. 747-753.

ASSOCIATION: Institutul politehnic (Polytechnic Institute), Timișoara

Card 3/3

SEMYEN, Adam, Conf. ing.

Model of alternating current network of the Faculty
of Electrotechnics, Timisoara. Energetica Rum 12 no. 3:
108-116 Mr '64.

SEMLYEN, A., conf. ing.

Optimum distribution of load between power stations and units.
Energetica Rum 12 no.10:526-534 O '64.

SEMYON, A., conf. ing.; BUCMA, C., ing.; CRISAN, O., ing.

Comparative studies on the determination of the optimum load
distribution to power stations by using a model. Energetica Rum
12 no.10:534-538 0 '64.

SEMMA, VASILY GRIGOR'YEVICH

SEMMA, Vasilii Grigor'yevich

[For high yields of sunflowers on large acreage] Za vysokyi urozhai
soniashnyka na velykykh ploshchakh. [Kharkiv] Kharkivske obl.vyd-vo.
1955. 32 p. (MLRA 10:9)
(Sunflowers)

SEMMA, V. G., Cand Agr Sci -- (diss) ^{thesis} "Effects of ~~the~~ time and methods of mechanized application of fertilizers upon potato yield." Khar'kov, 1958. 13 pp (Min of Agriculture USSR, Khar'kov Order of Labor Red Banner Agr Inst im V. V. Dokuchayev), 150 copies (KL, 35-58, 109)

SEMEL, E.

"Business accounting and operative planning of production." p. 700.

STROJIRENSTVI. (MINISTERSTVO TEZKEHO STROJIRENSTVI, MINISTERSTVO PRESNEHO STROJIRENSTVI A MINISTERSTVO AUTOMOBILOVEHO PRUMYSLU A ZEMEDELSKYCH STROJU.)
Praha, Czechoslovakia, Vol. 5, no. 9, Sept. 1955.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.
Uncl.

SEMEL, E.

SEMEL, E. For better planning; a book review. p. 219.

Vol. 4, No. 5, May 1956.

STROJIRENSKA VYROBA.

TECHNOLOGY

Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 3, March 1957

SEMEL, Edgar, inz.

Production cycles of products in the heavy machine industry. Podn
org 18 no.11:500-503 N '64.

1. Ceskomoravska-Kolben-Danek National Enterprise, Prague.

MYSLIVECEK, J.; SEDLACEK, J.; VRKOCOVA, M.; DVORAK, J.; JENICKOVA, H.; SEMMELOVA, V.

Preparation of prothrombin. Cas. lek. cesk. 92 no.18:500-501 1 May 1953.
(CML 24:5)

1. Of the Physiology Department of the Medical Faculty (Head--Prof.
F. Karasek, M.D.) of Charles University, Prague.

SEMMLER, Henryk

Considerations on rehabilitation in mental disorders. Neur.
&c. polska 6 no.4:501-504 July-Aug 56.

(MENTAL DISORDERS, therapy,
rehabil. (Pol))

SEMIKOV, V. Ye., Eng.

Power Engineering--Ivanovo.

Ivanovo's power engineers competing for better technical efficiency, Rab. energ. 1,
No. 1, 1951.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

YUSHKEVICH, Mikhail Osipovich; PEVZNER, R.L., doktor tekhnicheskikh nauk, professor, redaktor; AVGUSTINIK, A.I., doktor tekhnicheskikh nauk, professor, retsenzent; SEMOCHKIN, A.P., inzhener, retsenzent; ANTONOVICH, N.K., redaktor; ZALKIND, I.Ya., redaktor; GLEZAROVA, I.L. redaktor; LYUDKOVSKAYA, N.I., tekhnicheskii redaktor.

[Technology of ceramics] Tekhnologiya keramiki. Pod red. R.L.Pevznera. Izd. 2-oe, perer. Moskva, Gos. izd-vo lit-ry po stroitel'nym materialam, 1955. 383 p. (MIRA 9:6)
(Ceramics)

KONSTANTOPULO, Georgiy Spiridonovich; SILENOK, S.G., inzh., dots.
retsenzent; SEMOCHKIN, A.P., inzh., retsenzent;
OVSYANNIKOVA, Z.G., red.

[Mechanical equipment of plants manufacturing reinforced
concrete products and heat insulating materials] Mekhani-
cheskoe oborudovanie zavodov zhelezobetonnykh izdelii i
termoizoliatsionnykh materialov. Moskva, Vysshaia shkola,
1965. 426 p. (MIRA 18:6)

1. Gosudarstvennyy komitet po avtomatizatsii i mashino-
stroyeniyu pri Sovete Ministrov SSSR (for Silenok).
2. Lobnenskiy industrial'nyy tekhnikum (for Semochkin).

SEMOCHKIN, K.

Thermotechnical control on steamboats and motor ships performed by
the crew. Rech. transp. 24 no.5:36 '65. (MIRA 18:9)

1. Nachal'nik teplopartii Yoniscyskogo parokhodstva.

12(2)

SC7/113-59-6-16/21

AUTHOR: Semochkin, M.F.

TITLE: Checking the Diameter of the Bore of a Connecting Rod Big-End and the Perpendicularity of its Faces to its Axis

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 6, p 39 (USSR)

ABSTRACT: The article describes a connecting rod jig developed at the Yaroslavl' Motor Plant, to be connected to a high-pressure two-scale pneumatic floating device, for checking connecting rod big-end bores of 77.8-0.012 mm diameter and deviation of the plane of its faces from a line perpendicular to the generatrix of its bore of 0.05 mm for a length of 100 mm. It is twice as efficient as previous methods of control and has an accuracy of 2 microns. There is 1 diagram.

ASSOCIATION: Yaroslavskiy motornyy zavod (Yaroslavl' Motor Plant)
Card 1/1

SOV/113-59-7-13/11

12(2)

AUTHOR:

Semochkin, M.F.

TITLE:

A Device for the Comprehensive Control of Cylinder Sleeves

PERIODICAL:

Avtomobil'naya promyshlennost', 1959, Nr 7, p 37 (USSR)

ABSTRACT:

A device for the simultaneous control of several cylinder sleeve parameters was designed at the Yaroslavl Engine Plant. The error of this device does not exceed 2 microns. It functions according to a noncontact pneumatic method using a five-dial rotameter-type indicator unit. The device is shown by a diagram. The cylinder sleeve to be measured is placed into the gap between a ring containing 10 nozzles and a gage with 12 nozzles. The nozzles are connected to the dial indicators. One of the indicators classifies the cylinder sleeves into three different categories

ASSOCIATION

Card 2/2

Card 1/2

indicators two reference diameters outer and inner diameters. The device will sustain a maximum pressure of 10 atmospheres. The ring is made of brass and may be used for 10,000 cycles.

Yaroslavl Engine Plant)

Semochkin, M.K.

AUTHOR:

Semochkin, N.K.

TITLE:

On the Development of Higher Education in the Eastern Areas of the Country (O razvitii vysshego obrazovaniya v vostochnykh rayonakh strany)

PERIODICAL:

Vestnik Vysshey Shkoly, 1957, # 7, pp 9-18 (USSR)

ABSTRACT:

The author gives a review of the development of higher education in Siberia during the last 50 years. Then he tells of the considerable progress after WW II. In 1956 the number of higher schools in this area was 196. Among the newly organized vuzes are 23 technical institutes, such as the Karaganda and Kemerovo Mining Institutes; the Novosibirsk Electrical Engineering Institute; the Frunze, Stalingrad, and

3-7-3/29

3-7-3/29

On the Development of Higher Education in the Eastern Areas of the Country.

comparison with 1940 the contingent of students of the western vuzes increased by 2.4 times, and in the eastern areas by 4 times.

The author lists a series of suggestions and measures to be taken to meet the requirements of specialist training. The training of engineers- specialized in geology, mining, energetics, metallurgy, machine building, building of electrical equipment, radio, chemical technology, food technology, and others should be reorganized. The quality of training is not always satisfactory.

There is a distinct lack of professors and dotsents, which precludes the necessary development of scientific work. The author furthermore does not approve of the material educational basis of many vuzes in these areas. But a great deal of work has been already done in this connection and the last 5-Year Plan allots up to 40 per cent of all investments for the construction and extension of the eastern vuzes.

Experience has shown that the most economical and appropriate technical institution would be vuzes of a polytechnical and industrial type.

Card 2/3

The author then reviews the facilities in the Chelyabinsk,

BRZHESKIY, V. (Tikhvin); SEMOCHKIN, S. (Pskov); MOROZOV, P. (Sochi).

At a school of nursing. Sov.kras.krest 4 no.1:10 Ja-Mr '54.
(MLRA 7:4)

1. Nachal'nik kursov meditsinskikh sester (for Brzheskiy, Morozov).
2. Predsedatel' oblastnogo komiteta Krasnogo Kresta (for Semochkin).
(Nurses and nursing--Study and teaching)

SEMOCHKIN, V., inzh.; GLATMAN, S., inzh.

Large radio relay lines broaden the horizons of television.
Radio no.1:3-5 Ja '64. (MIRA 17:8)

33189

S/186/61/003/006/010/010
E040/E185

24.6210

AUTHORS: Lebedev, I.A., Pirozhkov, S.V., Semochkin, V.M., and Yakovlev, G.N.

TITLE: Separation of protactinium by the ion exchange method and properties of some protactinium compounds.

PERIODICAL: Radiokhimiya, v.3, no.6, 1961, 760-761

TEXT: Protactinium (Pa^{231}) was separated from neutron-irradiated specimens of thorium oxide enriched with ionium (Th^{230}). The specimen weighed 6.3 g and contained 2.01 g of ionium. Purification of the products of the reaction was carried out in an ion-exchange column made of Teflon and charged with Dowex-1X8 resin ground to 500 mesh. Uranium, protactinium and iron (retained on the resin) were washed out with 250 ml of 0.5N HCl + 0.1N HF. The α -radiation of the sample was determined in an ionizing spectrometer in conjunction with a 50-channel α -analyzer. 18% of the radiation was found to come from protactinium and 82% from uranium, which corresponds to 99.9% Pa^{231} and 0.1% U^{232} by weight. Measurement of the total radiation of the sample showed it to contain 11.8 mg of protactinium and 11 μg of U^{232} .
Card 1/2

X

33189

Separation of protactinium by the

S/186/61/003/006/010/010
E040/E185

The sample was further purified and the impurities (Na, Mg, Ca, Ba and Fe) were reduced to below 3%. Brief chemical properties and methods of preparation are given of protactinium oxide $\text{PaO}_{2.25}$, hydroxide, iodate and phynylarsonate. Acknowledgments are expressed to S.A. Baranov, Yu.F. Rodionov and N.M. Yashin for assistance. There are 11 references: 3 Russian translations from non-Soviet-bloc publications and 8 non-Soviet-bloc. The four most recent English language references read as follows:
Ref. 2: J. Golden, A.G. Maddock, J. Inorg. Nucl. Chem., v.2, 1, 46 (1956).

Ref. 4: M.L. Salutsky, K. Shaver, A. Elmlinger, M.L. Curtis, J. Inorg. Nucl. Chem., v.3, 5, 289 (1956).

Ref. 9: K.A. Kraus, G.E. Moore, J. Am. Chem. Soc., v.77, 5, 1383 (1955).

Ref. 10: A.G. Maddock, W. Pugh, J. Inorg. Nucl. Chem., v.2, 2, 114 (1956).

SUBMITTED: July 19, 1960

Card 2/2

X

LEBEDEV, I.A.; PIROZHKOV, S.V.; SEMOCHKIN, V.M.; YAKOVLEV, G.N.

Separation of protactinium by the ion exchange method and properties
of some protactinium compounds. Radiokhimiia 3 no.6:760-761
'61. (MIRA 14:12)

(Protactinium)
(Ion exchange)

SEMOCHKIN, V.N., inzh.; VAS'KOVSKIY, I.Ya., inzh.

Experience in the operation of radio relay lines. Vest.sviazi
25 no.2:22-23 F '65. (MIRA 18:6)

PATS, R.G.; SEMOCHKINA, T.V.

Polarographic determination of lead and copper in tellurium and
in a tellurium concentrate. Zav.lab. 28 no.7:800-801 (MIRA 15:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh
metallov.

(Lead--Analysis) (Copper--Analysis) (Tellurium--Analysis)

PATS, R.G.; TSFASMAN, S.B.; SEMOCHKINA, T.V.

Determination of Cu, Pb, Cd, and Zn in the products of nonferrous metallurgy in an alternating current polarograph. Zav.lab. 29
no.4:395-401 '63. (MIRA 16:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh metallov i Tsentral'naya laboratoriya avtomatiki.
(Metals--Analysis) (Polarography)

PATS, R.G.; SEMOCHKINA, T.V.

Rapid polarographic method of determining copper, lead,
cadmium, and zinc with the use of an alternating current
polarograph. Sbor. nauch. trud. Gintsvetmeta no.19:808-822
'62. (MIRA 16:7)

(Nonferrous metals--Analysis)
(Polarography)

L 16603-65 EWP(j)/EWP(t)/EWP(b) Pc-4 JD/RM
ACCESSION NR: AP4047115

Z/0034/64/000/010/0754/0754

AUTHOR: Kostal, V. (Engineer); Cempa, S. (Engineer); Semoda, J. (Engineer)

TITLE: Continuous-casting device for metals and thermosetting plastics. No. 136-61

SOURCE: Hutnicke listy, no. 10, 1964, 754

TOPIC TAGS: continuous casting, metal casting, plastic casting, tube casting

ABSTRACT: This Czechoslovak patent introduces a method of continuously casting tubular billets, according to which the billet is lifted from the mold at such a rate that the still-liquid central portion of the billet remains in the mold, leaving the tube surface smooth and shiny.

ASSOCIATION: none

Card 1/2

L 16603-65

ACCESSION NR: AP4047115

SUBMITTED: 22Apr63

ENCL: 00

SUB CODE: IE,MM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 5147

Card 2/2

SIMANOVSKAYA, R.E.; rukovoditel' raboty; SHPUNT, S.Ya.; VODZINSKAYA, Z.V.;
KOKINA, Z.I.; PSTUKHOVA, M.G.; NAYDENOVA, V.A.; VAS'YANOV, V.P.;
VASIL'YEV, N.F., master; ORLOV, N.N., starshiy apparatchik;
NAUMOV, P.M., starshiy apparatchik; TRUPIN, M.P., starshiy apparatchik;
VOLKOVA, V.M., starshiy apparatchik; ZORINA, Ye.A.; KIROVA, V.A.;
LUTOVA, Z.I., ZENKINA, Z.P., laborant; SEMOKHINA, L.A., laborant;
NIKITINA, N.A.

Phosphogypsum and its use in the manufacture of sulfuric acid and
portland cement; small-scale operation at the pilot plant of the
Scientific Research Institute of Fertilizers and Insectifuges.
[Trudy] NIUIF no.160:59-76 '58. (MIRA 12:8)

1.Sotrudniki Nauchnogo instituta po udobreniyam i insektofungisidam
(for Simanovskaya, Shpunt, Vodzinskaya, Kokina, Pastukhova,
Naydenova). 2.Zamestitel' nachal'nika 3-go tsekha Opytnogo zavoda
Nauchnogo instituta po udobreniyam i insektofungisidam (for Vas'yanov).
3.3-y tsekh Opytnogo zavoda Nauchnogo instituta po udobreniyam i
insektofungisidam-(for Vasil'yev, Orlov, Naumov, Trupin, Volkova,
Zorina, Kirova, Lutova, Zenkina, Samokhina). 4.TSentral'naya
analiticheskaya laboratoriya Opytnogo zavoda Nauchnogo instituta po
udobreniyam i insektofungisidam (for Nikitina).
(Gypsum) (Portland cement) (Sulfuric acid)

SKLYAR, V.A.; AVRAMENKO, K.P.; PAVLOV, D.F.; BOBKOV, N.V.; BERESTOVAYA, R.V.;
SKHYPNIK, Ye.P.; SEMONENKO, Ye.T.; SERGEYEVA, V.P.; KOLYAKO, D.A.,
red.; SOLDATOVA, N.P., otvetstv.za vypusk; GRISHNYAYEV, B.G.,
tekhn.red.

[Economy of Krasnodar Territory; a statistical manual] Narodnoe
khoziaistvo Krasnodarskogo kraia; statisticheskii sbornik.
Krasnodar, Gosstatizdat, 1958. 233 p. (MIRA 12:2)

1. Krasnodarskiy kray. Statisticheskoye upravleniye. 2. Nachal'nik
Krasnodarskogo krayevogo statisticheskogo upravleniya (for Kolyako).
(Krasnodar Territory--Statistics)

VEYS, R.A.; SEMONOV, S.M.

Absorption, distribution, and excretion of novobiocin. Antibiotiki
9 no.9:821-824 S '64. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,
Moskva.

~~Miroslav~~ Semonsky, M

Distr. 4E3d

✓ Racemization of hydrazides of *d*- and *l*-isolysergic acids.
Miroslav Semonský and Viktor Zikán. Czech. 83,917.
Sept. 16, 1956. Heating 800 mg. hydrazide of *l*-isolysergic
acid with 0.9 ml. $N_2H_4 \cdot H_2O$ 6 hrs. to 128-33° (bath temp.)
in N_2 , the access of air, CO_2 , and direct light being avoided,
leaving the mixt. in an ice box overnight, dilg. with 1.0
ml. abs. EtOH, sepg. the racemic hydrazide, washing with
abs. EtOH, H_2O , and abs. EtOH, and drying at room temp.
gave 210 mg. hydrazide of *dl*-isolysergic acid (I), m. 238-
40° (decompn.). Racemization of the *d*-form proceeds in
analogy giving the same result. The optimal amt. of
 $N_2H_4 \cdot H_2O$ to be used is approx. 3-fold (per wt.), since
larger amts. cause decompn. When 240 mg. I is heated to
136° with 5 ml. $N_2H_4 \cdot H_2O$, the loss is 50% after 2.5 hrs.
and 95% after 5 hrs. L. J. Urbánek

Semonsky, Miroslav

L. Ergot alkaloids. V. Partial synthesis of eight stereo-isomeric 1-hydroxy-2-butylamides of lysergic acid. MiroslavSemonský, Antonín Cerný, and Viktor Zikán (Výzkumný ústav farm. biotech., Prague). Chem. Listy 50, 110-24;Collection. Czechoslov. Chem. Commun. 21, 382-91 (1956); cf. C.A. 50, 2924a. —Treating (–)- (Ia) and (+)-2-amino-1-butanol (Ib) with the azide of *d*-isolysergic acid (II) and resolving the diastereoisomers by *D*- (IIIa) and *L*-dibenzoyltartaric acid (IIIb) gave (–)- (IVa) and (+)-1-hydroxy-2-butylamides (IVb) of *d*-isolysergic acid and of *L*-isolysergic acid (Va and Vb). Their isomerization yielded (–)-(VIa) and (+)-1-hydroxy-2-butylamides (VIb) of *d*-lysergic acid and of *L*-lysergic acid (VIIa and VIIb). Compared to methyl-ergobasini, (VIb), VIIa, and VIIb are less effective as uterotonics and as mydriatics. Treating *D*-tartaric acid with BzCl gave after boiling with C_6H_6 and crystn. from AcOEt, 68% *D*-dibenzoyltartaric anhydride, m. 194–6°, $[\alpha]_D^{25}$ –161°, whose hydrolysis with boiling H_2O gave 94% hydrate of IIIa, m. 89–90°. Anhyd. IIIa, prepd. by drying the hydrate *in vacuo* at 1 mm; at 80–100°, m. 133–9°, $[\alpha]_D^{25}$ 114°. Mixing II (prepd. from 5.64 g. *d*-isolysergic acid hydrazide according to C.A. 32, 3399) with 3.74 g. Ia in ether, evap., and recrystg. the residue from Me₂CO and then from C_6H_6 gave 4 g. of a mixt. of IVa and Va, crystals from Me₂CO, m. 180–1° (decompn.), $[\alpha]_D^{25}$ –12°. Partial resolution was observed during the crystn. from C_6H_6 . The mixt. (3.92 g.) of IVa and Va in 47 ml. hot MeOH treated with 4.35 g. IIIa in 11.5 ml. MeOH and cooled 4 hrs. in an ice bath gave 4 g. *H*-dibenzoyl-*D*-tartrate (VIIIa) of Va, m. 215–17° (decompn.) (from aq. 90% MeOH), $[\alpha]_D^{25}$ –95°. The filtrate was evapd. *in vacuo* and the residue crystd. from MeOH-Me₂CO to give 3.73 g. *H*-dibenzoyl-*D*-tartrate (IXa) of IVa, m. 165–6° (decompn.) (1 mole Me₂CO of crystn.), $[\alpha]_D^{25}$ 223°, pure compd., $[\alpha]_D^{25}$ 241°. —Decompn. 4.2 g. VIIIa with excess NaHCO₃ and extg. the aq. mixt. with Et₂O gave 1.83 g. Va, m. 192–4°.

Miroslav Šimonický, Antonín Černý,

(decompn.) (from Me₂CO), $[\alpha]_D^{25} -388^\circ$. IXa similarly gave 92.5% IVa, m. 90-4° (from C₆H₆) (C₆H₆ of crystn.), $[\alpha]_D^{25} 292^\circ$; pure IVa, $[\alpha]_D^{25} 350^\circ$. Epimerization of 1.48 g. Va in alk. medium gave 1.28 g. VIIa, m. 171-2° (decompn.) (1 mole CHCl₃ of crystn.), $[\alpha]_D^{25} 32.5^\circ$. Pure VIIa (from C₆H₆), m. 172-3° (decompn.), $[\alpha]_D^{25} 45^\circ$; D-tartrate, m. 148-52° (from MeOH) (2 moles MeOH of crystn.). Epimerization of IVa and isolation as the acidic oxalate gave 82% H oxalate of VIa, m. 210-12° (decompn.) (from 95% EtOH), $[\alpha]_D^{25} 65^\circ$. The free base VIa (93% by decapn. with NaHCO₃), m. 138-40° (from MeOH-C₆H₆) (solvent of crystn.), m. 192-4° (decompn.) after removing the solvent of crystn., $[\alpha]_D^{25} 2.3^\circ$. Treating II with Ib in Et₂O soln. and crystg. the residue from Me₂CO and then from C₆H₆ gave 60% of a mixt. of IVb and Vb, $[\alpha]_D^{25} 11.3^\circ$. The mixt. was subjected to the same sequence of operations as described for the (-)-series. H L-dibenzoyltartrate of IVb (98.5%), m. 215-17° (decompn.), $[\alpha]_D^{25} 94^\circ$; H L-dibenzoyltartrate of Vb (88%), m. 165-6° (decompn.), $[\alpha]_D^{25} -222^\circ$ (1 mole Me₂CO of crystn.), $[\alpha]_D^{25} -240^\circ$ (pure). IVb (90%), m. 192-4° (decompn.), $[\alpha]_D^{25} 384^\circ$; Vb (83%), m. 90-4°, $[\alpha]_D^{25} -294^\circ$ (1 mole C₆H₆ of crystn.), $[\alpha]_D^{25} -352^\circ$ (pure). VIIb (62%), m. 172-3° (decompn.) (from C₆H₆), $[\alpha]_D^{25} -45^\circ$; L-tartrate, m. 148-52° (decompn.) (from MeOH) (2 moles MeOH of crystn.); H oxalate of VIIb (73%), m. 210-12° (decompn.), $[\alpha]_D^{25} -66^\circ$; free VIIIb (93%), m. 138-40° (from MeOH-C₆H₆) (solvent of crystn.), m. 192-4° (decompn.) (no solvent of crystn.), $[\alpha]_D^{25} -2.1^\circ$.

M. Hudlíček

2/2
PM
RH

SEMONSKY, M.

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring Substances
and their Synthetic Analogs. G-3

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11443.

Author : Semonsky, M., Cherny, A., and Zikan, V.

Inst :

Title : Ergot Alkaloids. VII. Condensation of the Methyl Ester
of D-lysergic Acid with (+)-2-Amino-1-Butanol.

Orig Pub: Chem Listy, 51, No 1, 123-126 (1957) (in Czech); Sbornik
Chokhoslov Khim Rabot, 22, No 3, 1014-1018 (1957) (in
German with a Russian summary)

Abstract: Contrary to the indications of the literature the authors
have succeeded in synthesizing methylegobasine [(+)-
butanolamide of 2-D-lysergic acid] [sic] (I) and methyl-
ergobasine [(+)-butanolamide of 2-D-isolysergic acid]

Card : 1/4

18

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring Substances
and their Synthetic Analogs. G-3

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11443.

dibenzoyl-L-tartrate of IV (with 1 mol acetone), mp
165-166° (decomp; from CH₃OH-acetone), $[\alpha]_D^{20}$ -222°
(c = 0.5; CH₃OH), which on heating to 100° at 0.2 mm
loses acetone, $[\alpha]_D^{20}$ - 240° (c = 0.46; CH₃OH).
The chloroform-ethanol fraction is subjected again to
chromatography and I is obtained by the crystallization
of the enriched fractions from CHCl₃ and then from
C₆H₆; mp 172-173° (decomp), $[\alpha]_D^{20}$ - 44° (c = 0.425;
pyridine); the latter product according to chromatographic
data contains ~ 1% III. The acid oxalate of III is ob-
tained by crystallization from the last fractions ob-
tained from the second chromatographic separation; however,
the product still contains ~ 25% I. The middle fractions
from the second chromatographic separation on dissolution

Card : 3/4

19

CZECHOSLOVAKIA / Organic Chemistry. Natural Substances and
their Synthetic Analogs

Semonski, M.

Abs Jour : Ref. Zhur. Khimiya, No 3, 1958, 8124

Author : Semonski, Cerny, Zikan

Inst : Not given

Title : Ergot Alkaloids. VI. On Preparing the Hydrazide of DL-
isolyserinic Acid.

Orig Pub : Sb. chekhosl. khim. rabot, 1957, 22, No 3, 1062-1063

Abstract : RZhKhim, 1957, 44697

Card 1/1

5

Serotonin alkaloids. VII. Condensation of methyl *l*-tryptophan with (+)-2-amino-1-butanol. Michal Semonický, Antonín Černý, and Viktor Zikán (Výzkumný ústav farm. biochem., Prague). *Chem. listy* 51, 123-6 (1957); *C. A.* 51, 448a, 11363a.—Condensation of Me tryptophan (I) with an excess of (+)-2-amino-1-butanol (II) gave a mixt. which chromatographed yielded (+)-1-butanol-2-amide of *d*-isotryptophan acid (III), of *l*-isotryptophan acid (IV), of *d*-tryptophan acid (V), and of *l*-tryptophan acid (VI) in a ratio of 35:35:15:15 in a total yield of 65%. Heating a mixt. of 1.5 g. I, contg. 12% of C₆H₅, of crystn., and 1.33 g. II in a sealed tube under N with the exclusion of direct light 3 hrs. at 135-40° in an oil-bath, dissolving the mixt. in 70 ml. 9:1 CHCl₃-EtOH, extg. the soln. with 600 ml. 1% aq. tartaric acid, filtering the aq. exts. with activated charcoal, liberating the bases with 100 ml. N NaHCO₃, adding 100 g. NaCl, extg. the mixt. with Et₂O contg. 10% EtOH, drying the Et₂O exts. (1500 ml.) with K₂CO₃, and distg. the solvent gave 940 mg. of an amorphous residue. Chromatography of the residue in CHCl₃ over 25 g. Al₂O₃ and elution with CHCl₃ contg. 0.5 and 1% EtOH, resp., gave 620 mg. of a mixt. of III and IV; further elution with CHCl₃ contg. 2-5% EtOH gave 100 mg. of a mixt. of V and VI. Treating 620 g. III-IV in 7.2 ml. MeOH with 650 mg. *l*-HO₂CCH(OH)CH(OH)CO₂H (VII) in 1.5 ml. MeOH yielded 570 mg. acidic salt of VII with III, m. 215-17° (decompn.) (from 90% EtOH); [α]_D²⁵ 95°, and, by evapg. the mother liquors to dryness, 650 mg. of the salt of VII with IV, m. 155-6° (decompn.) (from MeOH-Me₂CO), [α]_D²⁵ -223° (with 1 mol. Me₂CO of crystn.), -240° (after drying at 100° and 0.2 mm.). Fractions V-VI (190 mg.) dissolved in 160 ml. CHCl₃ contg. 1% EtOH were chromatographed over 20 g. Al₂O₃ and eluted as above. The first fractions gave 25 mg. V, m. 172-3° (decompn.) (from C₆H₅), [α]_D²⁵ -44°, the last ones gave, after crystn. of their acidic oxalate, 20 mg. of a salt of VI contg. 25% V. The medium fractions were evapd. and dissolved in a mixt. of 1:1 CHCl₃-EtOH gave 60 mg. of a mol. compd. of V and VI, m. 212-13° (decompn.), [α]_D²⁵ -20°. The same compd. was isolated from a mixt. obtained by epimerization of a mixt. of III and IV with aq. alc. KOH, [α]_D²⁵ -20.4°. M. Hudlíček

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring Substances
and their Synthetic Analogs. G-3

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11444

Author : Semensky, M., Zikan, V., and Vctava, Z.

Inst :

Title : Ergot Alkaloids. VIII. Partial Synthesis of Several Cyclo-
alkyl Amides of D-Iso-Lysergic and D-Lysergic Acids.

Orig Pub: Chem Listy, 51, No 3, 592-596 (1957) (in Czech)

Abstract: In the course of the investigation of the relationships
between the structure and the activity of derivatives
of lysergic acid the authors have synthesized several
cycloalkylamides of the latter and have established that
the uterotonic, mydriatic, and antiserotinic activity
of a number of compounds, particularly those containing
4- and 5-membered rings markedly exceed the activity of

Card : 1/3

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring Substances
and their Synthetic Analogs.

G-3

Abs Jour: Referat Zhur-Khimiya, No 4, 1958, 11444

bol, -11.6 (0.43), 204; cyclobutyl- (II), 121-122,
acetone-C₆H₆, -16.4 (0.49), 209; cyclopentyl- (III),
121-122, acetone-C₆H₆, -27.9 (0.36, 220; cyclohexyl-
(IV), 131-133, acetone-C₆H₆, -33.3 (0.51), 225; cyclo-
heptyl- (V), 125-128, acetone-C₆H₆, -41.4 (0.33), 230.
The following amides of D-isolysergic acid were ob-
tained (the characteristics are given in the same order
as above): iso-I, 175-176, ether-alcohol, + 470 [sic]
(0.57); iso-II, 202-204, ether-alcohol, + 452 (0.56);
iso-III, 233-235, C₆H₆, + 463 (0.48); iso-IV, 204-205,
C₆H₆-hexane, + 449 (0.55); iso-V, 185-186, C₆H₆, +
439 (0.51).

Card : 3/3

27

G-2

CZECHOSLOVAKIA/Organic Chemistry - Naturally Occurring
Substances and Their Synthetic Analogs.

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25299

In butanol, cyclohexanol or cyclohexylamine, or at a lower temperature, the reaction occurs appreciably slower. At a higher temperature, considerable decomposition takes place. II is heated in BA for 4 hours at 135-140°, BA is driven off and the residue is converted to acid dibenzoyl-L-tartrates. From a methanol solution separates the acid dibenzoyl-L-tartrate of I, yield 30.5%, MP 215-217°, $[\alpha]_D^{20} + 95^\circ$; from the filtrate is isolated, by evaporation, the acid dibenzoyl-L-tartrate of II, yield 33%, MP 164-166° (decomposes; from CH₃OH-acetone), $[\alpha]_D^{20} - 221^\circ$. From the mother-liquors is obtained the molecular compound III + IV, MP 212-213° (decomposes; from chloroform and from benzene), $[\alpha]_D^{20} - 20^\circ$. By a similar procedure there are obtained from III 24% of I, and chromatographic separation yields 18% II and 11% III + IV. By the described device of removal of I and

Card 2/3

26

SEMONSKY, MIROSLAV

SEMONSKY, Miroslav; BERAN, Milos

Ergot alkaloids II.; comparison of normal and acid ergotamine tartrate with regards to their use in production of some pharmaceuticals. Cesk.farm. 4 no.2:85-86 Mar 55.

1. Z vyskonného ustavu pro farmaci a biochemii v Praze.

(ERGOT ALCALOIDS

ergotamine tartrate, normal, comparison with acid
ergotamine tartrate in use in drug prep.)

SEMONSKY, Miroslav

Ergot alkaloids. Cesk. farm. 4 no.4:198-208 May 55.

1. Z Vyzkumneho ustavu pro farmacii a biochemii v Praze.
(ERGOT ALKALOIDS)

Semonsky, Miroslav

✓ A new alkaloid of ergotoxine type in ergot. Karel Macek, Miroslav Semonsky, Stanislav Vanacek, and Antonín Černý (Forschungsinst. Pharm., Prague). *Naturwissenschaften* 42, 647(1955).—By chromatography in a formamide-benzene-gasoline system (C.A. 50, 2924a) alkaloids of the ergotoxine group from Spanish, Portuguese, and Hungarian ergot show 4 spots; the one of highest R_f (1.15 relative to ergocryptine 1.00) is a so far unknown alkaloid (EK 115) which is present in amts. from 0 to 7% of the sclerotia. In the formamide system of Pöhm and Fuchs (C.A. 48, 11725c) EK 115 migrates with ergocryptine. EK 115 contains lysergic acid in its mol. and a peptide chain contg. proline and leucine, but no dimethylpyruvic acid, pyruvic acid, nor phenylalanine.

B. J. C. van der Horst //

Semonsky, M.

Czechoslovakia/Analytical Chemistry - Analysis of Organic Substances G-3

Abs Jour : Referat Khim - Khimiya, No 3, 1957, 4612

Author : Semonsky, M. and Baren, H.

Inst : Not given

Title : Ergot Alkaloids. II. A Comparison of Neutral and Acid Salts of Ergotamine and Tartaric Acid, Used in the Production of Certain Pharmaceutical Preparations.

Abstract : A comparative study has been made of normal ergotamine tartrate meeting the requirements of the American Pharmacopoeia, normal ergotamine tartrate meeting the requirements of the British pharmacopoeia, analytically pure normal ergotamine tartrate, and analytically pure acid ergotamine tartrate. It has been established that the acid salt of the alkaloid base is most suited for application to the preparation of pharmaceutical preparations. For Communication I see RZhKhim, 1955.

Card 1/1

-54-

CA

10

Derivatives of bis(phenylsulfonyl)hydroquinone. V. Ettel and M. Semonský (Manufactures réunies produits chim. et mét., Prague-Vysoký, Czech.). *Collection Czechoslov. Chem. Commun.* 13, 592-600 (1948) (in French).—E. and S. prepd. a compd. (IX, see below) in a study of antibacterial sulfones. *p*-Benzoquinone (I) (1.1 g.) in 20 cc. warm EtOH was added in portions with shaking to 1.8 g. *p*-AcNHC₆H₄SH (II) in 30 cc. EtOH as long as an intense yellow color (not red-brown) persisted several min., the mixt. filtered, brought to boil, set aside 2 hrs., filtered, and set aside overnight, giving 1.3 g. (46.5%) 2-(*p*-acetamidophenylmercapto)hydroquinone (III), prismatic crystals, m. 165-6°. III (1.4 g.) was refluxed in 12 cc. of 10% alc. HCl for 1 hr., the mixt. evapd. to 1/2 vol., chilled, filtered, and the solid washed with a little 15% HCl-EtOH, giving 1.1 g. (81%) crude 2-(*p*-aminophenylmercapto)hydroquinone-HCl (IV), m. 231-2° (decompn.), after 2 crystals from 3% HCl-EtOH with charcoal. I (2.2 g.) in 40 cc. warm EtOH was treated with 1.7 g. II in 30 cc. EtOH, the mixt. warmed after 10 min. at 50° for 5 min., set aside, and the product filtered after 1 hr., washed with a little EtOH, and dried at 40°, yielding 2.3 g. (90%) 2-(*p*-acetamidophenylmercapto)-*p*-benzoquinone (V), m. 225.5-0.5° [from EtOH-MeOH (2:1)]. V (1.35 g.) was refluxed 2.5 hrs. in 10 cc. of 15% HCl-EtOH, the liquid evapd. to 1/2, set aside overnight, a little EtOH added, and the solid filtered and washed with a little EtOH, giving 1.2 g. (80%) 2-(*p*-aminophenylmercapto)-5(*p*-chlorohydroquinone-HCl) (VI), m. 245-6° (decompn.). VI in H₂O with solid KOAc yielded the free base, m. 145-6°. V (0.3 g.) in 17 cc. HOAc was treated with small quantities of powd. Zn with stirring until colorless, filtered, washed with HOAc, evapd. to dryness *in vacuo*, the residue dissolved in EtOH, 2 cc. H₂O added, the mixt. boiled with charcoal, filtered, dild. with 10 cc. H₂O, the EtOH removed *in vacuo*, and the soln. filtered and concd.; after removal of a brown material, the milky liqui-

deposited 2-(*p*-acetamidophenylmercapto)hydroquinone, m. 165-6°, did not depress the m.p. of III. V (2.7 g.) in 400 cc. hot EtOH was added to 2.8 g. AcNHC₆H₄SH in 75 cc. hot H₂O, 1250 cc. H₂O added, and the mixt. heated to boiling, then occasionally stirred in an ice-bath, yielding 3.4 g. (72%) 2-(*p*-acetamidophenylmercapto)-5(*p*)-(p-acetamidophenylsulfonyl)hydroquinone (VII), m. 232-3° (decompn.) (from dil. EtOH with charcoal). VII (2.36 g.) refluxed in 21 cc. of 10% HCl-EtOH for 1 hr., cooled, filtered, and washed with 5% HCl-EtOH yielded 2.1 g. (96%) 2-(*p*-aminophenylmercapto)-5(*p*)-(p-aminophenylsulfonyl)hydroquinone-2HCl (VIII), m. 250-1° (decompn.) (from 10% HCl-EtOH). VII (1.18 g.) in 10 cc. HOAc at 80-85° was treated dropwise with 1.1 cc. of 30% H₂O, in 10 min., the heating (80-5°) continued 15 min., and the mixt. cooled in an ice-bath; the 2,5(*p*)-bis(p-acetamidophenylsulfonyl)hydroquinone (IX), filtered, washed with HOAc, and dried at 45°, m. 267-8° (not changed from MeOH); yield, 1.2 g. (95.6%). IX (1.8 g.) in 20 cc. of 15% HCl-EtOH was refluxed 2 hrs. and the product filtered, after cooling and washed with 5% HCl-EtOH, to give 1.3 g. (74.5%) of 2,5(*p*)-bis(p-aminophenylsulfonyl)hydroquinone-2HCl (X), m. above 280°. X (1.3 g.) in dil. HCl, decolorized with charcoal and treated with solid Na₂CO₃, yielded 1 g. of almost white 2,5(*p*)-bis(p-aminophenylsulfonyl)hydroquinone (XI), m. 250-60°, after 3 crystals from EtOH (charcoal). Preparation of bisubstituted diaryl sulfones by the addition of sulfonic acids to certain quinones. *Ibid.* 601-615.—E. and S. agree with earlier workers (C.A.

over

C. Q.
1951Org. in Chemistry
10

The synthesis of certain substituted diaryl sulfones. V. Ritel, M. Semonský, and A. Černý (United Chem. Met. Works, Prague-Vysocany). *Collection Czech Chem. Commun.* 15, 653-8 (1950) (in English). -- The sulfones reported below were without marked antibacterial activity, even against *Mycobacterium tuberculosis*. $p\text{-NCC}_6\text{H}_4\text{SO}_2\text{H}$ dissolved (5 g.) in 20 cc. boiling water was gently heated 10 min. with 32 g. p -quinone (I) in 10 cc. EtOH, the mixt. filtered with charcoal, and the crystals which sepd. in the cold washed with water and recrystd. 3 times from water, yielding 2-(p -cyanophenylsulfonyl)hydroquinone (II), colorless needles, m. 182-3°. II (1.5 g.) dissolved in 10 cc. H_2SO_4 (d. 1.84), with cooling under water, was allowed to stand 5 days at room temp. in the open, then poured over ice, the resulting oil crystd. on standing and recrystd. from water gave 1.56 g. p -(2,5-dihydroxyphenylsulfonyl)benzamide (III), colorless rods, m. 230-7°. III (1.5 g.) refluxed 6 hrs. with 30 cc. of 40% H_2SO_4 and the product which sepd. on cooling filtered off, washed with water, and dried at 45°, yielded 1.5 g. p -(2,5-dihydroxyphenylsulfonyl)benzoic acid (IV), colorless, m. 295-6° (decompn.) (from MeOH). A soln. of 5.4 g. II in 20 cc. abs. EtOH was satd. with HCl gas at 0°, allowed to stand 48 hrs., and the resulting Et p -(2,5-dihydroxyphenylsulfonyl)benzimidate-HCl (V) washed with 5 cc. EtOH, then 10 cc. dry Et₂O, and kept over concd. H_2SO_4 ; pptn. of the filtrate with Et₂O gave addnl. V (total yield, 6.1 g.), colorless, m. 152-3°. V (2.5 g.) suspended in 10 cc. cold EtOH was allowed to stand 3.5 hrs. in 5 cc. of abs. alc. NH_3 (7.5%) at room temp., and the crude p -(2,5-dihydroxyphenylsulfonyl)-

benzimidine (VI) filtered off at the pump, washed with water, then EtOH, and dried in vacuo over KOH; addnl. VI, sepd. from the filtrate overnight. VI repeatedly crystd. from EtOH with alc. NH_3 , formed yellow microcrystals, m. 241-2°; picrate (prepd. from VI), m. 242-4° (decompn.) (from aq. EtOH). $p\text{-NCC}_6\text{H}_4\text{SO}_2\text{H}$ (10 g.) dissolved in 45 cc. boiling water was gently heated 10 min. with 9.8 g. thymoquinone (VII) in 60 cc. EtOH, and filtered with charcoal; the oil which sepd. in the cold, yielding 17 g. 3-(1)-(p-cyanophenylsulfonyl)thymohydroquinone (VIII), faintly yellowish, m. 162-3° (from aq. EtOH). Crude 4,3-HO(HO_2C) $\text{C}_6\text{H}_3\text{SO}_2\text{Cl}$ (from 50 g. of the SO_3H acid) was shaken with 252 g. NaHSO_3 in 500 cc. water (the soln. being kept alk. by slow addn. of 50% NaOH during reaction), the cooled filtrate acidified with 60% H_2SO_4 , and the 5-sulfynotalcrylic acid (IX) filtered off and dried at 40°; yield, 35-7 g., m. 202-5° (decompn., sealed tube). IX (10 g.) in 40 cc. of 10% H_2SO_4 stirred constantly at 70° with 4.8 g. I in 50 cc. water, and the soln. cooled, gave white crystals of 2-(4-hydroxy-3-carboxyphenylsulfonyl)hydroquinone (X); repeated recrystn. from aq. EtOH yielded X, H_2O , m. 234-7° (decompn.). A IX (4 g.) in 30 cc. of 50% aq. EtOH slowly added at 70° to 3 g. VII in 10 cc. of EtOH gave a brick-red oil; the cold soln. was dild. with water, and the oil sepd. and kept in a desiccator over silica gel until it was triturated with CHCl_3 , giving 3-(1)-(4-hydroxy-3-carboxyphenylsulfonyl)thymohydroquinone (XI), colorless, m. 179-80° (from xylene). The solubilities of the above compds. are reported in general terms for various org. solvents.

Lawrence Rosen

CA

Aminomethylation and hydroxymethylation of hydrocotarnine. M. Semonský (Czechoslov. Chem. Work. Prague-Vysocany). *Collection Czechoslov. Chem. Commun.* 15, 1024-36 (1951) (in English).—A series of compds. were prepd. to det. how far the individual, variously substituted components of 1- α -narcotine would retain the physiol. activity of the starting substance. The hydrocotarnine (I) used as starting material was prepd. from 1- α -narcotine by oxidative degradation (Schwyzer, *Die Fabrikation der Alkaloide* 1927, p. 46 (C.A. 22, 1017)). The resultant cotarnine was reduced with PtO_2 (C.A. 44, 1511c). Thus cotarnine was reduced with PtO_2 at 0° was treated with 1.86 g. 3.32 g. I in 25 ml. HCl cooled to 0° was shaken with cooling powd. $\text{ClCH}_2\text{CONHCH}_2\text{OH}$, the mixt. shaken with cooling until complete soln. resulted, let stand 24 hrs. at 0° , slowly made alk. with Na_2CO_3 (cooling) until 5-[(α -chloroacetamido)methyl]hydrocotarnine (II) just started to sep. on the walls of the flask, crude hydrochloride (?) filtered off after a short time, dissolved in a small amt. of H_2O , anhyd. Na_2CO_3 added, liberating a soapy base, the mixt. gently heated, and II filtered off, washed with H_2O , and dried at 40° ; yield, 3.55 g. Crystd. 3 times from EtOH-H₂O (charcoal), it turns yellow to red above 200° , sinters at 240° , m. $247-50^\circ$ (decompn.), is sol. in EtOH, MeOH, Me₂CO, CHCl_3 , and C_6H_6 , sparingly sol. in Et₂O. The yellow soln. in concd. H_2SO_4 becomes red-brown on warming. II styphnate. m. $197.8-8.5^\circ$. II (1.63 g.), 11 ml. abs. EtOH,

and 0.80 g. piperidine refluxed 45 min., the solvent removed in vacuo, and the residue dissolved in dil. HCl, filtered, and the filtrate cooled and treated with Na_2CO_3 potn. 5-[(α -(1-piperidylacetamido)methyl]hydrocotarnine (III), (yield 1.80 g.), m. $139-40^\circ$ (from MeOH-H₂O); picrate, m. $214.5-15.8^\circ$ (decompn.). 5-[(α -(Diethylaminoacetamido)methyl]hydrocotarnine dipicrate (IV), m. $183.5-3.5^\circ$, prepd. in analogous manner, the base being isolated in Et₂O prior to the prepn. of the dipicrate of II (3.27 g.), and 30 ml. 11%

HCl refluxed 3.5 hrs., dild. with 30 ml. H_2O , made distinctly alk. with anhyd. Na_2CO_3 , filtered, the free base taken up in CHCl_3 , filtered, the ext. dried (Na_2SO_4), and the CHCl_3 distd. off in vacuo yield 2.3-2.5 g. yellow-brown, viscous 5-(aminomethyl)hydrocotarnine (V). Crysta. from heptane causes serious losses. V is best purified and analyzed as the dipicronate (VI), m. $204-6^\circ$ (decompn.) (both preheated to 170°). VI crystd. from MeOH-H₂O gave VI- $2\text{H}_2\text{O}$ ($-2\text{H}_2\text{O}$ 140°). Crude V (1.10 g.) in 5 ml. abs. EtOH was refluxed 1.25 hrs. with 0.5 g. succinic anhydride put into a refrigerator, filtered, and the filter cake washed with EtOH and dried to yield 1.2 g. 5-[(succinylamino)methyl]hydrocotarnine (VII), m. $194.5-5.5^\circ$ (decompn., from EtOH). Crude V (2.0 g.), with 1.5 g. 37% CH_2O (C.A. 28, 98) yielded 87% dark sirup of 5-(dimethylaminomethyl)hydrocotarnine (VIII); dipicronate, m. $220-1.8^\circ$ (decompn.). Crude VIII (2.1 g.) and 5 g. Ac_2O refluxed 1.5 hrs., the excess Ac_2O distd. in vacuo, the residue dissolved in a small amt. of H_2O and dil. HCl, filtered, the filtrate made alk. with anhyd. Na_2CO_3 , extd. with CHCl_3 , the ext. dried with

CA

Preparation of n-butyl esters of unsaturated aliphatic-
aromatic acids. M. Semonský and J. Kuňák (Czech.
Chem. Works, Prague). Chem. Listy 45, 186-7 (1951).
Bu esters of $p\text{-O}_2\text{NC}_6\text{H}_4\text{CH:CHCO}_2\text{H}$ (I), $p\text{-O}_2\text{NC}_6\text{H}_4\text{CH:CHCO}_2\text{H}$ (II), and $p\text{-O}_2\text{NC}_6\text{H}_4\text{CH:CHCO}_2\text{H}$ (III) were prepd. by refluxing the corresponding acids
with BuOH and a small amt. of H_2SO_4 . Yields and m.ps.
are listed: I, 75%, 68-9°; II, 38%, 68-9°; III, 79%, 72-
73°. M. Hudlík

10

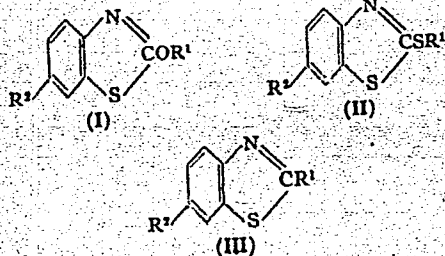
CA

Reduction of the lactone ring in *l*- α -narcotine. Miroslav Semonský (Pharm. Biochem. Research Inst., Prague; Czech.). *Chem. Listy* 45, 392-4 (1951).—Reduction of *l*- α -narcotine (I) with LiAlH_4 in C_6H_6 yielded 81% (2-methyl-8-methoxy-6,7-methylenedioxy-1,2,3,4-tetrahydro-1-isoquinolyl)(2-hydroxymethyl-3,4-dimethoxyphenyl)carbinol (II), m. 131-2° (from C_6H_5 -heptane), sol. in CHCl_3 ; picrolonate, m. 173-5° (from dil. EtOH); H_2PtCl_6 salt, crystals with 2 H_2O ; methiodide, m. 214-22° (from EtOH). Oxidation of II (2 g.) in 30 ml. 10% H_2SO_4 with CrO_3 (1.4 g. $\text{K}_2\text{Cr}_2\text{O}_7$ in 10 ml. 40% H_2SO_4) gave 0.24 g. *p*-meconine, m. 123-4°, and, after alkalization with 40% NaOH, *l*-narcotine. This was isolated as anhydrocotarnine-nitrocotarnine (0.28 g.), m. 128-9°. Electroreduction of I at a methane (0.28 g.), m. 128-9°. Electroreduction of I at a Pb electrode gave hydrodesoxycotarnine, m. 126° (from C_6H_5 -heptane) (mixed m.p. with II 108-111°), $[\alpha]_D^{25}$ 116°. M. Hudlický

25-23
new Chemistry

SEMONSKY, MIROSLAV

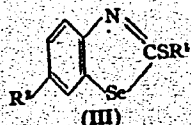
Tuberculostatics. I. 2,6-Substituted benzothiazoles.
 Viktor Ettel, Miroslav Semonský, Jiří Kuňák, and Antonín
 Černý (Pharm. Biochem. Research Inst., Prague, Czech.).
 Chem. Listy 46, 749-54 (1952).—2, and 2,6-Substituted
 benzothiazoles were prep'd. from 2-chloro-6-nitrobenzothia-
 zole with alcoholates (method A), by the reduction of the
 corresponding nitro derivs. (B), from 2-chloro-6-nitrobenzo-
 thiazole with mercaptans (C), and from benzothiazolethiols
 with alkyl halides and halogenated acids (D). R¹, R²,
 method, yields (%), and the m.ps. of the compds. of the
 general formulas I, II, and III are listed as follows: I: h



Bu, NO₂, A, 71, 58-9°; Bu, NH₂, B, 73, — [HCl salt, m.
 205-8° (decompn.)]; Bu, NHC₆H₁₁O₂ (D-galactoside), B,
 59, 96-7°; Bu, NHCO(CH₂)₂CO₂H, B, 90, 164-5°; Bu,
 N:CHPh, B, 70, 77°; Bu, NHC(=NH)NH₂, B, 68, —
 (picrate, m. 208-9°); iso-Am, NO₂, A, 75, 58-9°; cyclo-
 hexyl, NO₂, A, 95, 99.5-100.5°; cyclohexyl, NH₂, B, 75,
 — [HCl salt, m. 205° (decompn.)]; picrate, m. 221-4° (de-
 compn.); cyclohexyl, NHCO(CH₂)₂CO₂H, B, 90, 160-1°;
 CH₃CO₂H, NO₂, 86, — (Na salt, m. 335-40°); II: Bu, NO₂,
 C, 97, 91.5-2.5°; Bu, H, C, 77, —, b_p 167-8°, n_D²⁰ 1.6226;
 Bu, NO₂, C, 95, 63.5-1.5° (BuSO₃ analog, 68, 151°); Bu,
 NH₂, B, 70, — [HCl salt, m. 220° (decompn.)]; picrate, m.
 120-8°; Bu, NHCO(CH₂)₂CO₂H, B, 93, 161.5-2.5°; Bu,
 NHC₆H₁₁O₂ (D-galactoside), B, 71, 113-14°; Bu, NH-
 C₆H₁₁O₂ (2-deoxy-D-glucoside), B, 87, 160-2°; Bu, N:CHPh,
 B, 90, 62.5-3°; Bu, N:CHCH:CHPh, B, 73, 70-9.5°;
 Bu, N:CHC:CH:CH:CH(C(NO₂)O), B, 86, 158-8°; Bu,
 —SO₂Me, B, 53, 70-1°; Bu, NHCH₂SO₂Na, B, 87, 225-8°;
 iso-Am, NO₂, C, 98, 56-6.5°; iso-Am, NH₂, B, 79, — [HCl
 salt, m. 195-6°]; hexyl, NO₂, D, 88, 53-4°; hexyl, NH₂,
 B, 100, — [HCl salt, m. 205-10° (decompn.)]; PhCH₂,
 NO₂, C, 98, 110-17°; PhCH₂, NH₂, B, 100, — [HCl salt, m.
 280-5° (decompn.)]; HOCH₂CH₂, NO₂, D, 98, 113-14°;
 HOCH₂CH₂, NH₂, B, — [HCl salt, m. 245-50° (de-
 compn.)]; HO₂CCH₂, H, D, 96, 153-4°; HO₂CCH₂, NO₂, D,
 88, 213-14°; HO₂CCH₂CH₂, NO₂, D, 95, 169-71°; HO-
 CCH₂CH₂, NH₂, B, 42, 153-4°; HO₂C(CH₂)₂, H, D, 90, 71-
 2°; HO₂C(CH₂)₂, NO₂, D, 97, 130-1°; HO₂C(CH₂)₂, NH₂,
 B, 85, 137-8°; HO₂C(CH₂)₂SO₃ analog, NO₂, —, 81, 178-9°
 (from AcOH); HO₂C(CH₂)₂, SO₃H analog, —, 84, 271-2°
 (from aq. HCl); 1-carboxyheptadecyl, NO₂, D, 98, 76-8°;
 EtO₂CCH:CHCH₂, NO₂, D, 65, 112.5-13.5°. Unless other-
 wise stated, the following III were crystd. from MeOH or
 EtOH (concl. or dild.) (by other methods): p-AcNH-
 C₆H₄SO₂H, 77, 244-5°; p-O₂NC₆H₄SO₂, NO₂, 90, 176-7°
 (from EtOH-Me₂CO); p-O₂NC₆H₄SO₂, NO₂, 90, 231-2°
 (from PhCl); p-O₂NC₆H₄SO₂, NO₂, 90, 262-4° (PhCl);

1/2 Vid. Tol. M. Hudlický, J. K. Kuncak & Antonín Černý

$p\text{-H}_2\text{NC}_6\text{H}_4\text{S}_2\text{NH}_2$, 56 [HCl salt, m. 261-3° (decompn.) (from dil. EtOH)]. Some of the compds. were highly tuberculostatic against *Mycobacterium tuberculosis* in vitro; their effect in vivo was insignificant. II. 2,6-Substituted benzoselenazoles. Ibid. 756-8. Nitration of 2-benzoselenazolethiol (I) gave the 6-nitro deriv. (II). Its Na salt condensed with halogen derivs. yielded 2-alkylthio- and 2-(carboxyalkylthio)-6-nitrobenzoselenazoles. ($\text{O}_2\text{NC}_6\text{H}_4\text{CH}_2\text{Se}$) (10 g.) heated at 50-60° with 50 ml. CS_2 and 115 g. Na_2S in 175 ml. H_2O , the mixt. treated 1 hr. with a stream of H_2S , heated 1 hr. at 60-70°, filtered from the crystals which sepd. on cooling, and the mother liquor treated with H_2S gave addnl. crops of I, m. 157° (8.84 g., 83%). I (5 g.) added to 13.5 ml. H_2SO_4 below 30°, the soln. cooled to -5°, treated during 1.5 hrs. with 2.5 ml. 94% HNO_3 and 3 ml. H_2SO_4 below 0°, then stirred 30 min., poured onto ice, the crystals filtered, washed with H_2O , treated with 2-3 g. Na_2SO_3 in a soln. contg. 50 ml. NH_4OH in 50 ml. H_2O , and acidified yielded 5.45 g. (90%) II, m. 238-40° (decompn.) (from AcOH). II was refluxed with halogenated compds. 5-10 hrs. in aq. NaOH -EtOH soln.

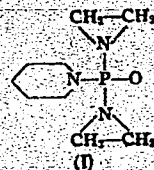


Compds. of the general formula III are described [R^1R^2 , yield (%), m.p.]: Pr. NO_2 , 60, 114-15° (from MeOH); Bu. NO_2 , 83, 85-6° (from MeOH); hexyl. NO_2 , 93, 78-7° (from MeOH); Bu. NH_2 , 160, — [HCl salt, m. 227-8° (from MeOH)]; HO_2CCH_2 , H, 93, 135-6° (from decompn.) (from EtOH)]; HO_2CCH_2 , NO_2 , 83, 212-14° (from AcOH); aq. MeOH); HO_2CCH_2 , NO_2 , 89, (Na salt cryst. with 1.5 H_2O ; $\text{HO}_2\text{CCH}_2\text{CH}_2$, NO_2 , 72, — (Na salt, m. 200-6° (from EtOH); $\text{EtO}_2\text{CH:CHCH}_2$, NO_2 , 80, 151.5-2.5° (from EtOH). Some of the compds. were tuberculostatic only in vitro. M. Hudlický

SEMONSKÝ, M.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Organic Chemistry

Preparation of pentamethylene amide of bis(ethyl-
entimino)phosphoric acid. M. Semonský and A. Černý
(Biochem. farm. vzt. distav. Průmysl. Československa, Lány
47, 480-70(1953)).—To a soln. of 24.4 g. Et₃N and 10.5 g.
ethylenimine in 200 ml. C₆H₆ was added dropwise during
30 min. at 15–17° a soln. of 24.4 g. piperidine dichloride
of H₃PO₄ in 50 ml. C₆H₆. After 1 day in the icebox, the
Et₃N.HCl was removed, washed with three 50-ml. portions
C₆H₆ and the C₆H₆ soln. evapd. in N at a temp. below 28°.
Distur. *in vacuo* yielded 22.35 g. l. b.p. 103–4°, n_D²⁰ 1.5028.



M. Hudlický

SEMONSKY, M.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Organic Chemistry

Tuberculostatics. V. Esters of *p*-aminocinnamic acid. Miroslav Semonsky and Jitka Kubak (Barn. biochem. vyzkumny ústav, Prague, Czech.). *Chem. Listy* 47, 608 (1953); cf. *ibid.* 281; *C. A.* 47, 12357g. — Bl. (I), Bu (II), and Ph (III) *p*-aminocinnamate were prepd. by the reduction of the corresponding *p*-nitrocinnamic esters. The esters I, II, and III inhibited *in vitro* the growth of the strain H37Rv by 11, 39 and 50%, resp. *p*-O₂NC₆H₄CH=CHCO₂Et (5.22 g.), 10.4 g. Fe, 13 ml. 20% AcOH, and 60 ml. EtOH were refluxed 4 hrs., the Fe pptd. with hot 40% NaOH (1.4 ml.), the filtrate dild. with 130 ml. H₂O and allowed to crystallize giving 3.8 g. (80%) I, m. 68-9°. III, (93%), prepd. similarly, m. 81-2° (from aq. EtOH). — III, yield 57%, m. 144-5° (from EtOH). The *p*-NO₂C₆H₄CH=CHCO₂Ph (68%), m. 162-3° (from AcOEt), was prepd. by heating a mixt. of 19.3 g. *p*-NO₂C₆H₄CH=CHCO₂H, 11.3 g. PhOH, 60 ml. PhNO₂, and 4 ml. POCl₃ 2 hrs. at 180-40° M. Hudlicky

SEMONSKY, MIROSLAV

4

Synthesis of 3,11,12,13-tetramethoxyberberine and its oxidation to 3,11,12,13-tetramethoxyprotoberberine. Miroslav Semonský and Viktor Zikán (Farm. biochem. Vyzkumny ústav, Prague, Czech.) Chem. Listy 47, 1374-8 (1953).—By way of *m*-methoxyphenethylamine (I) and the *m*-methoxyphenethylamide of 3,4,5-trimethoxyphenylacetic acid (II) was prepd. 6-methoxy-1-(3,4,5-trimethoxybenzyl)-3,4-dihydroisoquinoline (III), the reduction of which gave 6-methoxy-1-(3,4,5-trimethoxybenzyl)-1,2,3,4-tetrahydroisoquinoline (IV). IV with CH_2O yielded 3,11,12,13-tetramethoxyprotoberberine chloride (VI). Hydrogenation of 25 g. *m*- $\text{MeOC}_6\text{H}_4\text{CH}_2\text{CN}$ over 10 g. Raney Ni in 180 ml. EtOH satd. at 0° with NH_3 at an initial pressure of 115 atm. 2 hrs. at 60° and 2 hrs. at 90° gave, after alkalization and ether extr., 16.6 g. (65%) I, b. 92-4°; *HCl* salt, m. 145-6°; H_2PtCl_6 salt, m. 204-5° (decompt.). Condensation of I with CH_2O and cyclization gave 6-methoxy-1,2,3,4-tetrahydroisoquinoline. *HCl* salt, m. 233-4°. Condensing 13.50 g. I with 10.8 g. 3,4,5-(MeO) $_3\text{C}_6\text{H}_2\text{CH}_2\text{CO}_2\text{H}$ in boiling Tetralin with azeotropic removal of H_2O gave II which, dissolved in 24 ml. C_6H_6 and treated at the b.p. with 40.5 g. POCl_3 in 125-ml. C_6H_6 (40 min.) yielded, by extr. with 2% *HCl* and purification, 20 g. (60%) III, m.

226-7° (from EtOH); *picrate*, m. 141-2° (from Me_2CO -EtOH). III, *HCl* (13.06 g.) in 67 ml. MeOH with 26.8 g. Sn and 53 ml. 37% *HCl* refluxed 8 hrs. gave, after dila. with 300 ml. H_2O , precip. of Sn with Zn, liberation of the base with NH_3 , extr. with Et_2O and treatment of the ext. with afe. *HCl*, 12.5 g. (80%) IV, *HCl*, m. 104.5-5.5° (from dil. aq. *HCl*); *picrate*, m. 180-7°. IV, *HCl* (2.77 g.) in 25 ml. H_2O , alkalinized with NH_3 , extd. with Et_2O , the base dissolved in 5 ml. MeOH treated 3 days at room temp. with 1.4 g. aq. CH_2O (d. 1.085), the mixt. acidified with 12.5 ml. *HCl* (1:1) gave, after heating and dila. with 30 ml. *HCl* (1:3) 2.3 g. 80% of V, *HCl*, m. 211-13° (from dil. *HCl*). *Free base*, V, m. 91-2° (from Et_2O); *picrate*, m. 171-2°. V, *HCl* (1.5 g.) dissolved in 250 ml. H_2O , neutralized with NaHCO_3 , treated with 3% KMnO_4 at room temp. to permanent coloration, the mixt. filtered hot, evapd. *in vacuo* to 50 ml., the residue acidified with *HCl*, extd. with Et_2O gave, in the aq. layer, yellow crystals (80 mg.) of VI. Tetrahydrate, m. 173-5° (decompt.) (from aq. *HCl*). M. Hudlický

SEMONSKY, M.

3-Isoamylphlorisovalerophenone. M. Semonský, J. Kušák, and A. Černý (Farm. biochem. výzkumný ústav, Prague, Czech.). Chem. Listy 47, 1412(1953).—3-Isoamylphlorisovalerophenone (I) was prepd. by the Hoesch synthesis. Satg. with dry HCl a mixt. of 3.32 g. isoamylphloroglucinol, 3.2 g. $\text{Me}_3\text{CHCH}_2\text{CN}$, 3 g. anhyd. ZnCl_2 , and 60 ml. Et_2O during 12 hrs., evapg. the solvent, boiling the residue 75 min. with 100 ml. H_2O , and extg. the mixt. with Et_2O gave, after evapu., 3.2 g. (67.5%) I, m. 167–8°.

M. Hudlický

Jan

Excerpta Medica 3/1 sec 16 Jan 55 Cancer

91. SEMONSKY M., ETTTEL V., JELINEK V., ZIKAN V. and PUJMAN V. Výzkumny Úst. farm. Biochem., Praha. Pokusy o chemoterapii rakoviny. I. γ -p-methoxyphenyl- a γ -2,3,4-trimethoxyphenyl- α , β , dichloro- Δ^{α} , β -krotonlakton *Attempts at chemotherapy of cancer. I. γ -(p-methoxyphenyl)- and γ -(2:3:4-trimethoxyphenyl)- α , β -dichloro- Δ^{α} , β -crotonlactone* Cas. Lék. čes. 1954, 93/8 (197-198)

Both compounds were prepared and tested in a study of the dependence of the cytostatic effect of substituted derivatives of 1- α -narcotine and of its degradation products on their chemical structure. The γ -p-methoxyphenyl compound (II-604) caused in vitro a complete repression of growth of chick fibroblasts, whilst the 2nd compound (II-611) gave a 52% repression of growth under the same conditions. Both compounds exhibited moderate toxic effects on growing fibroblasts, which were manifested by the pyknosis of the nuclei and by the accumulation of mitotic figures at the stage of anaphase. As regards the effect on transplanted adenocarcinoma in mice (strain dba) II-604 in non-toxic doses (5 mg. i.m. 3 times a week in 0.1 ml. olive oil) causes retardation of growth of the tumour, which was, compared with the controls, less than half as large at the same time (22 and 31 days after the transplantation); it also had a lower percentage dry weight and the number of the mitoses per 100 cells was 1.4 times smaller. II-611 had no suppressing influence on the growth of the tumour in non-toxic doses (the same as with II-604). Higher doses of both compounds caused death of the normal animals as well as those with transplanted tumour. The harmlessness of the therapeutic dose was also confirmed by haematological studies; II-604 had no toxic influence on haematopoiesis.

Semonský - Prague

SEMONSKY, M.

M. Semonsky Prague: Zue Chemie der Mutterkornalkaloide

SO: Chem. Technik, Nov. 1955

~~SEMOMSKY~~, Miroslav

Principles of chemotherapy of malignant tumors. Cesk. onkol.
2 no.1:14-23 1955.

1. Vyzkumny ustav pro farmacii a biochemii v Praze. Dr. ing.
Miroslav Semonsky, Praha XII, Kourimska 17.

(NEOPLASMS

malignant, chemother.)

(CHEMOTHERAPY, in various diseases
tumors, malignant)

SEMONSKY, MIROSLAV

6

Tuberculostatics. X. 2,5-Substituted pyridines. Miroslav Semonský and Antonín Černý (Výzkumný ústav farm.-biokem., Prague). *Chem. Listy* 49, 731-6; *Collection Czechoslov. Chem. Commun.* 20, 1221-6 (1955) (in Ger.); cf. *CA*, 49, 6327f. — 2-Mercapto-5-nitropyridine (I) with alkyl- and aralkyl chlorides gave 2-alkyl- or aralkyl-mercapto-5-nitropyridines 2,5- $\text{RS}(\text{O}_2\text{N})\text{C}_4\text{H}_3\text{N}$ (II) which were reduced to the corresponding amino derivs. (III), or oxidized to the corresponding 2,5- $\text{RSO}(\text{O}_2\text{N})\text{C}_4\text{H}_3\text{N}$ (IV). I (3.12 g.) in a soln. of 0.8 g. NaOH in 2 ml. H_2O and 35 ml. EtOH was refluxed 24 hrs. with 0.02 mole RCl; the cryst. products were filtered off and the liquid products extd. with Et₂O after the evapn. of EtOH. Refluxing 3.12 g. I and 0.02 mole RCl in 30 ml. EtOH 4-6 hrs. gave purer products. The following II were prepd. (R, % yield, and b.p. or m.p. given): Bu , 86, b. 134-5°; $n\text{-C}_6\text{H}_{13}$, 80, b. 133-4°; $\text{CH}_3\text{CH}_2\text{CH}_2$, 89, 42-3° (from MeOH); PhCH_2 , 88, 76-7° (from EtOH); $p\text{-MeO-C}_6\text{H}_4\text{CH}_2$, 78, 112-13° (from EtOH); $p\text{-O}_2\text{NC}_6\text{H}_4\text{CH}_2$, 83, 123-4° (from AcOEt); $3,4\text{-O}_2\text{N}(\text{MeO})\text{C}_6\text{H}_3\text{CH}_2$, 77, 133-4° (from EtOH); $\text{Et}_2\text{NCH}_2\text{CH}_2$, 80, b. 140-7°; HO_2CCH_2 , 81, 123-4° (from EtOH); $\text{HO}_2\text{C}(\text{CH}_2)_3$, 83, 102-3° (from EtOH); $\text{HO}_2\text{C}(\text{CH}_2)_4$, 83, 102-3° (from EtOH); $p\text{-O}_2\text{NC}_6\text{H}_4\text{CH}_2$, 84, 154-5° (from AcOH); $p\text{-MeO-C}_6\text{H}_4\text{COCH}_2$, 84, 157-8° (from AcOH); $3,4\text{-(HO)}_2\text{C}_6\text{H}_3\text{COCH}_2$, 89, 183-4° (from EtOH). Refluxing 1/127 mole of II, 30 ml. EtOH, 12 ml. 20% AcOH, and 7 g. Fe filings 4-10 hrs., pptg. the Fe with 40% NaOH (pH 7.5-8), evapg. EtOH, extg. the

mixt. with Et₂O, and pptg. with HCl gave the following: III, HCl (R, % yield, and m.p. given): Bu , 87, 127-8° (from Et₂O-EtOH); $n\text{-C}_6\text{H}_{13}$, 95, 125-7° (from alc. HCl); $\text{CH}_3\text{CH}_2\text{CH}_2$, 84, 134-6° (from alc. HCl); PhCH_2 , 89, 201-2° (from EtOH); $p\text{-H}_2\text{NC}_6\text{H}_4\text{CH}_2$, 78, 165-70° (decompn.) (from alc. HCl); $p\text{-MeOC}_6\text{H}_4\text{CH}_2$, 93, 152-62° (decompn.) (from alc. HCl); $3,4\text{-H}_2\text{N}(\text{MeO})\text{C}_6\text{H}_3\text{CH}_2$, 84, 220-5° (decompn.) (from alc. HCl). Dissolving 0.005 mole II in 10 ml. warm AcOH, adding at 85-90° in 3 portions 2 ml. 30% H_2O_2 during 3 min., heating the mixt. 30 min. at 85-90°, and dilg. with 5-10 ml. H_2O gave IV (R, % yield, and m.p. given): Bu , 89, 58-9° (from aq. EtOH); $n\text{-C}_6\text{H}_{13}$, 91, 78-9° (from EtOH); PhCH_2 , 90, 138-9° (from EtOH); $p\text{-O}_2\text{N-C}_6\text{H}_4\text{CH}_2$, 89, 198-200° (from AcOH); BzCH_2 , 53, 133-4° (from EtOH); $p\text{-O}_2\text{NC}_6\text{H}_4\text{COCH}_2$, 50, 208-10° (from AcOH). All the IV had tuberculostatic activity of the same order as isonicotidoyl hydrazide (in vitro). M. Hudlický

Country : Czechoslovakia
 Category :
 Abs. Jour :
 Author : Cerny, A. and Semonsky, M.
 Institut. : Not given
 Title : Synthesis of 6-Mercaptopurine
 Orig Pub. : Ceskoslov Farmac, 7, No 7, 402-403 (1958)
 Abstract : An improved synthesis of 6-mercaptopurine (I) is described. A suspension of 20 gms hypoxanthine in 600 ml abs pyridine is treated with 100 gms P_2S_5 , the solution is refluxed for 3 hrs and vacuum-distilled, the residue is hydrolyzed with 2 liters of water and 60 ml of conc HCl, conc NH_4OH is added to pH 5-6, and I (monohydrate) is isolated, yield 83%, mp 312-314° (decomp; from water).
 P. Sokov

G-2

45374

Card: 1/1

- SEMONSKY, M.; ROCKOVA, E., JELINEK, V.

Study on carcinostatic drugs in the series of trans-B-acyl-B-halogenoacrylic acids. Neoplasma, Bratisl. 7 no.1 suppl:131-132
' 60.

(ANTINEOPLASTIC AGENTS)

SEMONSKY, M.; CERNY, A.; JELINEK, V.

Substances with antineoplastic effect. II. Some 6-carboxyalkylthio-
purine. Coll Cz Chem 25 no.4:1091-1099 Ap '60. (EEAI 9:12)

1. Forschungsinstitut für Pharmazie und Biochemie, Prag
(Carboxyl group) (Alkyl groups)
(Purinethiol) (Antineoplastic agents)

SEMONSKY, M.; ZINKAN, V.

Ergot alkaloids. XV. Partial synthesis of cycloalkylamides of d-dihydrolysergic acid(I) and N-[d-6-methyl-8-ergolin(I)-yl]-N'-cycloalkylurea. Coll Cz Chem 25 no.4:1190-1198 Ap.'60. (EEAI 9:12)

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.
(Ergot alkaloids) (Urea) (Dihydrolysergic acid)
(Cyclic compounds) (Alkyl groups)
(Methylindoloquinoline) (Amides)

ZIKAN, V.; SEMONSKY, M.

Ergot alkaloids. XVI. Some N-(D-methylisoergolenyl-8)-, N-(D-6-methylergolenyl-8)- and N-(D-6-methylergoline(I)-YL-8)-N'-substituted urea. Coll Cz Chem 25 no.7:1922-1928 J1 '60.
(EEAI 10:9)

1. Forschungsinstitut für Pharmazie und Biochemie, Prag.

(Ergot alkaloids) (Urea) (Ergoline)
(Methyl group)

SEMONSKY, M.; ZIKAN, V.

Ergot alkaloids. XVII. Preparation of (+) and (-)-3-cyclopentyl-1-hydroxy-2-propylamides of D-isolysergic- and D-Lysergic acids.

Coll Cz Chem 25 no.8:2038-2044 Ag '60. (EEAI 10:9)

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

(Ergot alkaloids)	(Isolysergic acid)	(Lysergic acid)
(Amides)	(Cyclopentyl group)	(Hydroxy compounds)
	(Propyl group)	

BERAN, M.; SEMONSKY, M.

Ergot alkaloids. XXII. Separation of mixtures of the levorotatory alkaloids of the ergotamine and ergotoxine group by countercurrent distribution. Cesk. farm. 11 no.9:440-451 N '62.

1. Vyzkumny ustav pro farmacie a biochemii, Praha.
(ERGOT ALKALOIDS) (ERGOTAMINE) (CHEMISTRY, PHARMACEUTICAL)

CZECHOSLOVAKIA

BERAN, M. and SEMONSKY, M. Pharmaceutical and Biochemical Research Institute, Prague. (Vyzkumny ustav pro farmacii a bi-ochemii, Praha.)

"Ergot Alkaloids, XVIII, A contribution to the Preparation of Ergosine."

Prague, Czechoslovenska Farmacie, Vol 11, No 10, Dec 62, pp 533-534.

Abstract: A crude base of ergosine was obtained by counter-current distribution of a solution of a mixture of ergot alkaloids in a 1% tartaric acid-chloroform solution. Purification to analytically pure substance was obtained with (+) dl (p-toluy)tartrate.

5 references, 3 Western, 2 Czech.

1/1

VRBA, L.; SEMONSKY, M.

Ergot alkaloids. Part 21: On preparation of some (—)-O-diacyl tartaric acids. Coll Cz Chem 27 no.7:1732-1735 J1 '62.

1. Forshungsinstitut fur Pharmazie und Biochemie, Prag.

ZIKAN, V.; SEMONSKY, M.

Ergot alkaloids. Part 20: Some substituted
N-(D-dihydrolysergyl(I)- α, β -dehydrovalinamide. Coll
Cz Chem 27 no.7:1729-1732 J1 '62.

1. Forschungsinstitut für Pharmazie und Biochemie, Prag.

SEMONSKY, M.; ROCKOVA, E.; CERNY, A.; KAKAC, B.; MACEK, K.

Substances with antineoplastic effect. Part 4 : Some γ -aryl- α, β -substituted Δ^2 -crotonlactones. Coll Cz Chem 27 no.8:1939-1974 Ag '62.

1. Forschungsinstitut für Pharmazie und Biochemie, Prag.

*

ZIKAN, V.; SEMONSKY, M.

Contribution to the preparation of γ -cyclohexylbutyric acid-ethyl ester. Coll Cz Chem 27 no.11:2704-2705 N '62.

1. Forschungsinstitut für Pharmazie und Biochemie, Prag.

*

CS.R

SEMONSKY, M.; ROCKOVA, E.; ZIKAN, V.; KAKAC, B. & JELINEK, V.

Research Institute for Pharmacy and Biochemistry, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 2, 1963,
pp 377-396

" Substances with Antineoplastic Effect V. Solvolysis of Some p -Aryl- α, β -
-Dihalogen- $\Delta^{\alpha, \beta}$ -Crotonlactones

(4)

SEMONSKY, M.

CZECHOSLOVAKIA

ZIKAN, V; SEMONSKY, M.

Research Institute of Pharmacy and Biochemistry,
Prague (for all)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 5, 1963, pp 1196-1200

"Ergot Alkaloids XXVII. N-(D-1,6-Dimethyl-8-Isoergolenyl)-N',N'-Diethylurea, its Stereoisomers and the N',N'-Dimethylanalogues."

SEMONSKY, M.; ROCKOVA, E.; ZIKAN, V.; KAKAC, B.; JELINEK, V.

Substances with antineoplastic activity. Pt.5. Coll Cz Chem
28 no.2:377-396 F '63.

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

CERNY, A.; SEMONSKY, M.; ZIKAN, V.

Ergot Alkaloids, Pts. 25-26. Coll Cz Chem 28 no.4:898-903,
1080-1083 Ap '63.

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

CZECHOSLOVAKIA

CERNY, A; SEMONSKY, M.

Research Institute of Pharmacy and Biochemistry (Forschungs-
institut fur Pharmazie und Biochemie), Prague(for both)

Prague, Collection of Czechoslovak Chemical Communications,
No 9, 1963, pp 2517-2520

"Ergot Alkaloids XXVIII. Report on the Question of the
Mechanism of thePartial Isomerization of Ergot Alkaloids
from Ergobasin-Type."

JELINEK, V.; SEMONSKY, M.

Carcinostatic effect of β -(methoxybenzoyl)- β -bromo (or chloro)-acrylic acid. *Čas. lek. česk.* 102 no.7:183-185 15 F '63.

1. Vyzkumný ústav pro farmácii a biochemii v Praze, reditel MUDr. inz.
O. Nemecek.

(ANTINEOPLASTIC AGENTS) (PHARMACOLOGY)
(NEOPLASMS, EXPERIMENTAL)

SEMONSKY, M.; CERNY, A.; KAKAC, B.; SUBRT, V.

Substances with antineoplastic activity. Pt. 6. Coll Cz
Chem 28 no. 12:3278-3289 D '63.

1. Forschungsinstitut fur Pharmazie und Biochemie, Prag.

FRANCOVA, V.; RAZ, K.; FRANC, Z.; CERNY, A.; SEMONSKY, M.; JELINEK, V.

Antineoplastic drugs. VII. Comparison of the absorption, tissue distribution, and excretion of ^{35}S -buthiopurin and its ^{35}S -butyl ester in S-180 sarcoma-bearing mice. Neoplasma 11 no.2:165-170 '64

1. Pharmacy and Biochemistry Research Institute, Prague, Czechoslovakia.

DVORAK, O.; VERTA, J.; SEMENSKY, M.

Report on treatment of advanced carcinoma of genitals with the preparation MBBA. Neoplasma (Bratisl.) 12 no.1:93-100 '65

1. Oncological Laboratory of the Faculty of General Medicine, First Gynecologic Clinic in Prague; Research Institute for Pharmacy and Biochemistry, Prague, Czechoslovakia.

JELINEK, V.; SEMONSKY, M.; FRANCOVA, V.; CERNY, A.

Substances with antineoplastic action. Part 13. Neoplasma
(Bratisl) 12 no.5:469-471 '65.

1. Pharmacy and Biochemistry Research Institute, Prague, Czechoslovakia. Submitted January 8, 1965.

FRANCOVA, V., dr. CSc., (Kourimska 17, Praha 3); RA7, K.; FRANK, G.;
LEBAN, V.; NEJEDLIK, V.; SLONCZEK, M.

Substances with antineoplastic properties. Part 12. Czech.
farm. 14 no.6:315-319 Ag '65.

1. Vyzkumny ustav pro farmacii a biochemii, Praha. Submitted
December 19, 1964.

MALEK, P.; KOLC, J.; Technicka spoluprace: M. Skulova, M. Semoradova

Studies on dynamics of circulation and activities of substances
in the organism in shock conditions. I. Rules of administration
in tourniquet shock in rabbits. Cesk. fysiolog. 5 no.2:191-199
23 June 56.

1. Ustav klinické a experimentální chirurgie, Praha.
(SHOCK, experimental,
eff. of hematotropic & lymphotropic substances (Cz))

MALEK, P.; KOLC, J.; Technical collaboration: M. Skulova, M. Semoradova

Studies on the dynamics of the circulation and action of substances in the organism in conditions of shock. I. Laws of absorption in tourniquet shock in rabbits. Physiol. bohém. 5 no.2:214-223 1956.

1. Institute of Experimental and Clinical Surgery, Prague-Krc.

(SHOCK, experimental,

hematotropic & lymphotropic substances, absorp. in
tourniquet shock in rabbits)

(BLOOD,

hematotropic substances, absorp. in tourniquet shock
in rabbits)

(LYMPH,

lymphotropic substances, absorp. in tourniquet shock
in rabbits)

Střih K 11. 11. 77
MALEK, P.; KOLO, J.; Technická spolupráce L. Buřka, M. Semorádova

Physiological basis of experimental & clinical lymphography. Cas. lek.
cesk. 96 no.47:1463-1471 22 Nov 57.

1. Ústav klinické a experimentální chirurgie, Praha-Křc, přednosta doc.
Dr B. Spacek. Adres: P. M., Praha-Křc, Budejovická 800.

(LYMPHATIC SYSTEM, radiography

physiol. basis of clin. & exper. lymphography (Cz))

SEMOTAN, J.

Transorbital leucotomy. Neur. & psychiat.cesk. 13 no.4:201-210
Oct 50. (GLML 20:5)

1. Of the Out-Patient and Sanatorium Department of the State Psychiatric Hospital in Prague VIII-Bochnice (Head--Head-Physician Jiri Semotan,M.D.) and of the Surgical Department of the State District Hospital in Prague VIII-Bulovka (Head--Head-Physician Prof. Jan Knobloch,M.D.).

SEMOTAN, J.
SEMOTAN, J.

Developments in psychosurgery. Rozhl. chir., 29:6, 1950. p. 187-93

1. Of the Out-Patient and Sanatorium Department of the State
Psychiatric Hospital in Prague VIII-Bohnice.

CLML 19, 5, Nov., 1950

SEMOTAN, J.

Does industrial psychiatry serve a useful purpose? p. 185.

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. (Ceskoslovenska akademie ved. Ceskoslovenska vedecka technicka spolecnost pro zdravotni techniku a vzduchotechniku) Praha, Czechoslovakia. Vol. 2, no. 4, 1959.

Monthly list of East European Accessions (EEAI), Vol. 9, no. 1, Jan. 1960

Uncl.

SEKOTAN, J.

Seventieth anniversary of Prof. MUDr Jaroslav Stuchlik. Cesk.
psychiat. 56 no.3:195-200 Je '60.
(BIOGRAPHIES)

SEMOTAN, Jiri

Role of mental hygiene in astronautics. Cesk.psychiat.57 no.1:
61-69 F '61.

(SPACE FLIGHT psychol)

L 12938-66

ACC NR: AP6005673

SOURCE CODE: CZ/0079/65/007/002/0184/0185

AUTHOR: Semotan, J.; Semotanova, M.

ORG: Psychiatric Hospital, Prague

TITLE: Mental hygiene of women working in a machine factory [This paper was presented at the Third Interdisciplinary Conference on Experimental and Clinical Study of Higher Nervous Functions held in Marianske Lazne from 19 to 23 October 1964.]

SOURCE: Activitas nervosa superior, v. 7, no. 2, 1965, 184-185

TOPIC TAGS: man, psychiatry, industrial hygiene

ABSTRACT: The research on which the article is based was conducted by the University Institute of Marxism-Leninism, the Economic Institute of the Czechoslovak Academy of Sciences, the Faculty of Machine Engineering, and the car factory AZNP at Mlada Boleslav. 376 women were investigated, partly by questionnaires, and partly by interviews in small groups. Most women chose their jobs because of higher pay; only some of the very young ones out of personal interest. These women suffer now from overexertion in trying to compete with men. In adult women, there are frequent clashes of interest between the job and domestic duties. Unfavorable influence of night-shift work and of work-room "parties" was noticed. The main improvement will be achieved when more space in nurseries and kindergartens becomes available.

SUB CODE: 05, 06 / SUBM DATE: none
Card 1/1

SEMOTAN, J.

75th birthday of Prof. Dr. Jaroslav Stuchlik. Cesk. psychiat
61 no.2:136-138 Ap '65